

Mail Stop Appeal Brief - Patents
Appeal Brief Under 37 C.F.R. § 41.37

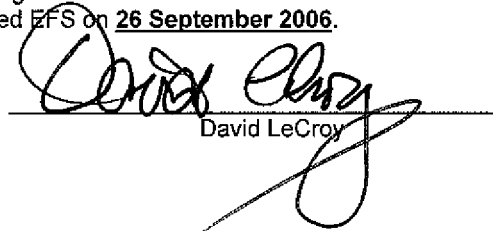
PATENT APPLICATION
Attorney Docket No. 1942.PC

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS: CAO, Hongjie *et al.*
SERIAL NO.: 09/932 204 **GROUP ART UNIT:** 1616
FILED: 17 August 2001 **EXAMINER:** GOLLAMUDI, Sharmila S
ENTITLED: USE OF XANTHAN GUM AS A HAIR FIXATIVE

CERTIFICATE of TRANSMISSION UNDER 37 C.F.R. § 1.8

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office via the USPTO web-based EFS on 26 September 2006.


David LeCroy

Mail Stop Appeal Brief - Patents
Commissioner for Patents
Post Office Box 1450
Alexandria, Virginia 22313-1450

APPEAL BRIEF UNDER 37 C.F.R. § 41.37

Dear Sir:

In compliance with the requirements of 37 C.F.R. § 41.37(c), Appellants respectfully submit their brief in furtherance of the Notice of Appeal, which was transmitted to the United States Patent and Trademark Office on 30 April 2006.

I. REAL PARTY IN INTEREST

National Starch and Chemical Investment Holding Corporation is the owner of the entire right, title and interest in and to the invention described in this patent application by virtue of an Assignment from the inventor, which Assignment was recorded in the United States Patent and Trademark Office on 17 August 2001 at Reel 012112, Frame 0100.

II. RELATED APPEALS AND INTERFERENCES

With respect to all other prior and/or pending appeals, interferences or judicial proceedings that will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal, there are no such appeals or interferences known to Appellant, Appellant's legal representative or assignee.

III. STATUS OF CLAIMS

Claims 1, 4, 6-14, 16-18 and 20-28 are pending in this application. Claims 1, 4, 6-14, 16-18 and 20-28 stand rejected. No claims have been allowed.

The claims on appeal are claims 1, 4, 6-14, 16-18 and 20-28, which are set forth in the attached Claims Appendix.

IV. STATUS OF AMENDMENTS

All claims stand as amended in Applicant's Reply of 30 April 2006, and as entered in the Examiner's Advisory Action of 25 May 2006.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The following summary of the subject matter defined in each of the independent claims involved in the Appeal is offered to enable the Board to more quickly determine where in the application enabling embodiments of the claimed subject matter are described. However, because other embodiments may fall within the scope of the claims, this summary should not be construed as limiting of the claims hereafter discussed.

Claims 1 and 24 are the only pending independent claims, with remaining claims 4, 6-14, 16-18 and 20-28 depending directly or indirectly from those claims. For ease of reference, claims 1 and 24 are as follows –

1. A hair cosmetic composition comprising a fixative effective amount of xanthan gum, wherein the composition has a high humidity curl retention of at least about 80% for two hours at 90% relative humidity, and wherein the xanthan gum has been heat treated at a moisture content of less than about 8%, a temperature of at least about 100°C for at least about 30 minutes, wherein the cosmetic composition is a hair fixative composition..
24. A hair cosmetic composition, wherein the fixative consists essentially of a xanthan gum and the high humidity curl retention is at least about 80% after two hours at 90% relative humidity, and wherein the xanthan gum has been heat treated at a moisture content of less than about 8%, a temperature of at least about 100°C for at least about 30 minutes, wherein the composition is a hair fixative composition

From the above independent claims it is seen that the present invention is generally directed towards hair fixative composition comprising heat treated xanthan gum, wherein the xanthan gum used in the composition has been heat treated at a temperature of at least about 100°C for at least about 30 minutes to a moisture content of less than about 8% (p. 3, lines 15-18). Claim 24 differs from claim 1 in that the fixative is limited to xanthan gum. Xanthan gum has been found to be advantageous in such compositions in that it can be used with other hair fixatives, as well as provide rheology modifying and other properties such as excellent stiffness, gloss, dry comb, wet comb, non-flake, anti-static, feel and high humidity curl retention (p. 2, lines 18-22).

As previously pointed out, the foregoing summary of the invention has been provided only for purposes of aiding the Board in locating at least an exemplary embodiment of the claimed subject matter within the specification. However, it is also understood that other

possible embodiments as may exist within the specification may have been omitted. Compliance with this requirement, therefore, should not be applied to limit the claims.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The grounds of rejection presented for in this Appeal are:

- (a) Claims 1, 4, 6-11, 18 and 24-26 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Japanese Patent Publication No. 11-236310 to Kousei Laboratories, Ltd. ("Kousei").
- (b) Claims 12, 21, 22 and 27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kousei.
- (c) Claims 13, 14, 16, 17, 20-23 and 28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kousei in view of U.S. Patent No. 6,113,881 to Bhatt *et al.* ("Bhatt").

VII. APPELLANT'S ARGUMENTS

A. REJECTION UNDER 35 U.S.C. § 102(b) AS BEING ANTICIPATED BY KOUSEI.

Claims 1, 4, 6-11, 18 and 24-26 stand rejected as being anticipated by Kousei. For the following reasons, Applicants respectfully request reconsideration of the Examiner's final rejection of claims 1, 4, 6-11, 18 and 24-26 under 35 U.S.C. § 102(b).

1. The Standard for Anticipation

In order to anticipate a claim, the reference must teach each and every element of the claimed invention –

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "When a claim covers several structures or compositions, either generically or as alternatives, the claim is deemed anticipated if any of the structures or compositions within the scope of the claim is known in the prior art." *Brown v. 3M*, 265 F.3d 1349, 1351, 60 USPQ2d 1375, 1376 (Fed. Cir. 2001). See also MPEP § 2131.02. "The identical invention must be shown in as complete detail as is contained in the . . . claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

2. The Scope and Content of the Prior Art

Kousei teaches cosmetics containing a xanthan gum having an apparent average molecular weight of 16,000,000 or higher (p. 2 of translation). The high molecular weight xanthan gum is obtained by heating the xanthan gum so that it has a drying decrease of 50 weight % or less at 100-140°C (212-284°F) for 30 minutes or more (pp. 4-5 of translation). The heat treatment can be performed in an inert gas that does not react with the xanthan gum or an inert solvent (p. 5 of translation). The inert gases and liquids help avoid discoloration of the gum (*id.*). Examples of inert gases included nitrogen, helium, carbon dioxide and **water vapor** (*id.*). Air is used in the examples, which is well known in the art to contain moisture. Inert solvents include various alcohols, alkane diols, and ethers (*id.*).

All working examples of Kousei were heat-treated in air, and therefore in the presence of moisture. A vacuum was used in order to avoid discoloration (see p. 5, 3rd ¶, next to last sentence (“... it is also possible to avoid discoloration even in air by reducing the pressure to a sufficient degree”).

‘Drying decrease’ is defined by Kousei as “the decrease in quantity when the gum is heated for 5 hours at 105°C under atmospheric pressure” (p. 4 of translation). Accordingly, at most, no more than half of the moisture in the gum should be removed when heat treated (see p. 5 of translation, stating that the gum should have a drying decrease (or decrease in quantity) of 50 weight % or less, preferably 20 weight % or less, and especially 15 weight % or less). Kousei exemplifies this definition by referring to the drying decrease of liquid-cultured xanthan gum. According to Kousei, if the reduction in the amount of the gum when heat treated is greater than 50 weight % (*i.e.*, if the gum is dried to less than 50 weight % of its original raw weight), the gum temperature will not rise sufficiently and it will have no effect (p. 5 of translation). Accordingly, Kousei does not teach xanthan gum having “moisture content of less than 50%, preferably less than 20%, and most preferably less than 15%”.

With reference to Example 2 of Kousei, the xanthan gum therein is heat treated in air. It is well known that air contains moisture; therefore, one skilled in the art would NOT expect the xanthan gum of Example 2 of Kousei to have a moisture content of less than 8 %, even more so

less than 1 %.

Kousei states that cosmetics containing its xanthan gum include skin cosmetics such as foundations, rouges, eye shadows, mascaras, eye liners, lipsticks, toilet water, emulsions, lip creams, hand creams, cleansers and hair cosmetics (p. 11 of translation). Kousei only exemplifies skin cosmetics, and makes no other reference to hair cosmetics, failing to indicate what types of hair cosmetics its xanthan gums might be useful for (e.g., shampoos and/or conditioners, which typically consider viscosity applications; or hair sprays, gels, etc., which are directed towards hair fixative applications).

Kousei only teaches the use of high molecular weight xanthan gum as a thickener or rheology (viscosity) modifier. Viscosity modification and hair fixation (film-forming) are two unrelated applications (and therefore are directed towards different structural applications) that typically require unrelated polymers.

3. Claims 1, 4, 6-11, 18 and 24-26 of the Present Invention are not Anticipated

Kousei does not teach the use of xanthan gum as a hair fixative. Instead, Kousei only teaches the use of high molecular weight xanthan gum as a thickener or rheology (viscosity) modifier.

As shown above, Kousei does not teach or suggest heat treating xanthan gum to a moisture content of less than about 8%. Further, nowhere does Kousei teach or suggest that its xanthan gum will provide high humidity curl retention of at least about 80% for two hours at 90% relative humidity (a hair fixing property). Finally, Kousei only briefly mentions hair cosmetics, and does not specifically teach hair fixative cosmetics. With specific reference to claims 25 and 26, nowhere does Kousei teach or suggest the specifically claimed hair fixatives required under a proper 102(b) rejection.

For at least these reasons, Kousei does not teach or suggest with specificity each and every element of the presently claimed invention, and therefore cannot be said to anticipate it.

B. REJECTION UNDER 35 U.S.C. § 103(a) AS BEING UNPATENTABLE OVER KOUSEI.

Claims 12, 21, 22 and 27 stand rejected as being unpatentable over Kousei. For the following reasons, Applicants respectfully request reconsideration of the Examiner's final rejection of claims 12, 21, 22 and 27 under 35 U.S.C. § 103(a).

1. The Standard for Obviousness

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also *In re Lee*, 277 F.3d 1338, 1342-44, 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002) (discussing the importance of relying on objective evidence and making specific factual findings with respect to the motivation to combine references); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

A statement that modifications of the prior art to meet the claimed invention would have been " 'well within the ordinary skill of the art at the time the claimed invention was made' " because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). See also *In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1318 (Fed. Cir. 2000) (Court reversed obviousness rejection involving technologically simple concept because there was no finding as to the principle or specific understanding within the knowledge of a skilled artisan that would have motivated the skilled artisan to make the claimed invention); *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 50 USPQ2d 1161 (Fed. Cir. 1999) (The level of skill in the art cannot be relied upon to provide the suggestion to combine references.).

2. The Scope and Content of the Prior Art

Kousei was discussed in VII.B.2, *supra*.

3. Claims 12, 21, 22 and 27 of the Present Invention are not Obvious

As shown above, Kousei does not teach or suggest xanthan gum heat treated to a moisture content of less than about 8%. Further, Kousei does not teach or suggest use of xanthan gum as a hair fixative. Claims 12, 21, 22 and 27 all depend from independent claims requiring xanthan gum having a moisture content of less than about 8% as a hair fixative, in contrast to Kousei. With specific reference to claims 21 and 22, Kousei only briefly mentions hair cosmetics, and does not teach or suggest cosmetics having fixative properties. Instead, all of its Examples are directed towards skin cosmetics (*e.g.*, creams, lotions, toilet water) for improving the viscosity of those cosmetics. Regarding the Examiner's statement that the compositions of Kousei "can be used in hair cosmetics and in the form of a cream or gel", Applicants state that nowhere does Kousei state or teach that its xanthan gum can be used as a hair fixative in a hair fixative cream or gel. Kousei only exemplifies skin creams (Example 3), states that cosmetics include skin cosmetics such as lip and hand creams, indicates that the formulation can be an oil-in-water cream, and refers to various forms of the cosmetic as being solid, lotion, or "other forms which can be carried, such as pastes, gel, powders, etc." (p.11, last ¶ of Kousei). As such, Kousei does not provide motivation to one skilled in the art to use its xanthan gum to provide fixative properties to hair, specifically, xanthan gum having a moisture content of about 8% or less.

Regarding claims 12 and 27, the Examiner recognizes that Kousei does not teach the turbidity of the composition. The Examiner then states that one skilled in the art would be "motivated to decrease turbidity of the hair composition to manipulate the clarity of the composition", referring to U.S. Patent No. 6,147,038 in support of her claim. The '038 patent is directed towards optically clear hair conditioning composition obtained by the use of amino-functional silicone microemulsions. The '038 patent defines clarity in terms of NTU (col. 3, lines 9-17). According to the '038 patent, clarity of the compositions is "manipulated" by use of these amino-functional silicone microemulsions (col. 2, lines 55-62). Previous polysiloxane compositions did not provide this degree of clarity. Neither Kousei nor the present application

refer to use of amino-functional silicon microemulsions for providing clarity to cosmetics. Further, for a reference to render a claimed invention obvious, it must provide motivation to one skilled in the art to achieve the claimed inventive effect. Kousei is completely silent with respect to clarity. In contrast, the present invention exemplifies in Table 5 that both untreated and heat-treated xanthan gum provide clarity comparable to commercially available hair gels containing synthetic film-forming polymers.

For at least these reasons, Kousei does not render the presently claimed invention obvious. It is believed that these remarks overcome the Examiner's rejection of claims 12, 21, 22 and 27 as being unpatentable over Kousei. Withdrawal, therefore, of the rejection under 35 U.S.C. § 103(a) is respectfully requested.

C. REJECTION UNDER 35 U.S.C. § 103(a) AS BEING UNPATENTABLE OVER KOUSEI IN VIEW OF BHATT.

Claims 13, 14, 16, 17, 20-23 and 28 stand rejected as being unpatentable over Kousei in view of Bhatt. For the following reasons, Applicants respectfully request reconsideration of the Examiner's final rejection of claims 13, 14, 16, 17, 20-23 and 28 under 35 U.S.C. § 103(a).

1. The Standard for Obviousness

The standard for obviousness is stated in Section VII, B, 1 *supra*.

2. The Scope and Content of the Prior Art

Kousei was discussed in Section VII, B, 2 *supra*, those remarks incorporated herein. As noted by the Examiner, Kousei teaches that its cosmetic compositions may include other ingredients such as water soluble polymers as long as they do not hinder the efficacy of the invention (p. 7 of the translation). These water soluble polymers include, among others, film forming agents such as polyvinyl alcohol and polyvinyl pyrrolidone (p. 8 of the translation). However, as noted by the Examiner, Kousei does not specify the instant polymers, nor does it specify the use of a surfactant-free mousse formulation.

Bhatt is cited by the Examiner for its teachings of a polymer (carboxylated polyurethane resin) for use in surfactant-free hair mousse compositions. Bhatt also appears to be cited by the

Examiner for teaching the second hair fixative polymers (col. 13, lines 16-67) claimed in claims 14 and 17.

3. Claims 13, 14, 16, 17, 20-23 and 28 of the Present Invention are not Obvious

As shown above, Kousei does not teach cosmetics containing xanthan gum having a moisture content of less than about 8%. Further, Kousei does not teach or suggest that its xanthan gum will provide high humidity curl retention of at least about 80% for two hours at 90% relative humidity (a hair fixing property). Finally, Kousei only briefly mentions hair cosmetics, and does not specifically teach hair fixative cosmetics wherein xanthan gum is the hair fixative. Therefore, even if one were to combine Kousei with Bhatt, one still would not have the presently claimed invention as Bhatt makes no reference to natural polymers of any kind for use as hair fixatives, more particularly, within the claimed limitations.

Further, considering the Kousei reference as a whole, one skilled in the art would understand Kousei as providing a solution for improved thickening (*i.e.*, greater viscosity). In contrast, considering the Bhatt reference as a whole, one skilled in the art would understand that enhanced viscosity is an undesirable effect (col. 13, lines 6-15, teaching that benefits include low viscosity). Therefore, one skilled in the art considering the Kousei reference as a whole and its objective of providing a cosmetic with improved thickening and stability, would not be motivated to look to Bhatt for a second polymer to include in its cosmetics, as Kousei states that only those ingredients can be added to its formulation that do not hinder the efficacy of its invention.

Kousei does not teach cosmetics containing xanthan gum having a moisture content of less than about 8% and that provide high humidity curl retention of at least about 80% for two hours at 90% relative humidity (a hair fixing property). Kousei only briefly mentions hair cosmetics, and does not specifically teach hair fixative cosmetics wherein xanthan gum is the hair fixative. Therefore, for an obviousness rejection to render the claimed invention unpatentable, the references in combination must teach all these limitation. Further, there must be a motivation to combine the references. Kousei states that other water-soluble polymers, including film-forming polymers, can be used in its composition, which is sufficient to provide motivation to look to the art for other film-forming polymers such as those taught in Bhatt.

However, Bhatt still does not teach the other missing elements not found in Kousei, specifically xanthan gum having a moisture content of less than about 8% and that provide high humidity curl retention of at least about 80% for two hours at 90% relative humidity. Therefore, even if one were to combine the two references, one still has not obtained the presently claimed invention.

For at least these reasons, Kousei in view of Bhatt does not teach or suggest with specificity each and every element of the presently claimed invention, and therefore cannot be said to render it obvious.

VIII. CONCLUSION


For the reasons mentioned above, Appellant's hair fixative composition is not anticipated by Kousei, made obvious by Kousei, or rendered obvious by Kousei in view of Bhatt, as neither reference, alone or in combination, teach hair fixative composition comprising xanthan gum that has been heat treated to a moisture content of less than 8%.

For all of the foregoing reasons, it is respectfully submitted that the final rejection of all claims is untenable and should not be sustained. Allowance of the claims is believed to be in order, and such allowance is respectfully requested.

Respectfully submitted,

Dated: 26 September 2006

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CLAIMS APPENDIX

Claims of U.S. Application No. 09/932 435 on Appeal

1. A hair cosmetic composition comprising a fixative effective amount of xanthan gum, wherein the composition has a high humidity curl retention of at least about 80% for two hours at 90% relative humidity, and wherein the xanthan gum has been heat treated at a moisture content of less than about 8%, a temperature of at least about 100°C for at least about 30 minutes, wherein the cosmetic composition is a hair fixative composition.
4. The composition of claim 1, wherein the temperature is at least 105°C.
6. The composition of claim 1, wherein the moisture content is less than about 1%.
7. The composition of claim 1 wherein the heat treatment is for at least about one hour.
8. The composition of claim 7 wherein the heat treatment is for at least about 2.5 hours.
9. The composition of claim 1 wherein the heat treatment is at a moisture of less than about 1% and the temperature is at least about 105°C for at least about 2.5 hours.
10. The composition of claim 1, wherein the composition is selected from the group consisting of a spray, a mousse, a hair lotion, a cream, a pomade, and a gel.
11. The composition of claim 10, wherein the composition is a gel.
12. The composition of claim 1 characterized by a viscosity of at least about 8000 cps, and a turbidity of no more than about 100 NTU (Nephelometric Turbidity Units).
13. The composition of claim 1, further comprising a second fixative polymer.

14. The composition of claim 13 wherein the second fixative polymer is selected from the group consisting of acrylates copolymer, octylacrylamide/acrylates/butylaminoethyl methacrylate copolymer, acrylates/octylacrylamide copolymer, VA/crotonates/vinyl Neodecanoate copolymer, poly(N-vinyl acetamide), poly(N-vinyl formamide), polyurethane, corn starch modified, sodium polystyrene sulfonate, polyquaternium-4, polyquaternium-10 and polyurethane/acrylates copolymer.
16. The composition of claim 11 further comprising a second fixative polymer.
17. The composition of claim 16 wherein the second fixative polymer is selected from the group consisting of acrylates copolymer, octylacrylamide/acrylates/butylaminoethyl methacrylate copolymer, acrylates/octylacrylamide copolymer, VA/crotonates/vinyl Neodecanoate copolymer, poly(N-vinyl acetamide), poly(N-vinyl formamide), polyurethane, corn starch modified, sodium polystyrene sulfonate, polyquaternium-4, polyquaternium-10 and polyurethane/acrylates copolymer.
18. A method of preparing the composition of claim 1, comprising dispersing the xanthan gum in water; and mixing in other hair cosmetic components.
20. A method of preparing the composition of claim 17 comprising dispersing the xanthan gum in water; and mixing in other hair cosmetic components.
21. A method of providing fixative properties to the hair comprising applying the composition of claim 1.
22. A method of providing curl retention under high humidity conditions comprising applying the composition of claim 1.
23. The composition of claim 1, wherein the composition is a surfactant-free hair mousse.

24. A hair cosmetic composition, wherein the fixative consists essentially of a xanthan gum and the high humidity curl retention is at least about 80% after two hours at 90% relative humidity, and wherein the xanthan gum has been heat treated at a moisture content of less than about 8%, a temperature of at least about 100°C for at least about 30 minutes, wherein the composition is a hair fixative composition.
25. The composition of claim 24, wherein the composition is selected from the group consisting of a spray, a mousse, a hair lotion, a cream, a pomade, and a gel.
26. The composition of claim 25, wherein the composition is a gel.
27. The composition of claim 24 characterized by a viscosity of at least about 8000 cps, and a turbidity of no more than about 100 NTU (Nephelometric Turbidity Units).
28. The composition of claim 24, wherein the composition is a surfactant-free hair mousse.

EVIDENCE APPENDIX

Enclosed herewith is a copy of the Rule 132 Declaration of inventor Gary T. Martino, previously submitted to the Office during the prosecution of the present application on 10 May 2004, and which Appellants rely upon as evidence of Appellants' position of patentability in the present Appeal Brief. This Declaration was entered into the record by the Examiner in the Action mailed out from the Office on 18 April 2005.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF

CAO, ET AL.

S.N. 09/932,435

FILED: 17 AUGUST, 2001

FOR: USE OF XANTHAN GUM AS A HAIR
FIXATIVE

Group Art Unit: 1616

Examiner: GOLLAMUDI

Commissioner of Patents and Trademarks
Washington, D.C. 20231

DECLARATION UNDER RULE 132 (37 C.F.R. §1.132)

Sir:

I, Gary T. Martino, a citizen of the United States of America, currently residing at 21 Kingland Circle, Monmouth Junction, New Jersey 08852 declare as follows.

I am familiar with the issues raised in this case.

I graduated from Wagner College with a Bachelor of Science degree in Chemistry in 1981 and a Masters of Science in Organic Chemistry from Seton Hall University in 1984.

Since 1981, I have worked at National Starch and Chemical Company. I am currently the Director, Technical Service, for the Personal Care Division. In this and previous positions at the company, I have identified and developed a number of personal care products for the market, including several hair fixatives.

I am the inventor of U.S. patents and numerous non-US patents. I have published in various trade journals and have presented at trade shows and to the industry.

My experience has provided me with a strong knowledge of various cosmetic product forms, leading-edge technologies, and the whole process of a product from concept to market.

The experiments below were conducted under my supervision and guidance to demonstrate that the prior art compositions would not be suitable for fixing hair as claimed in the above-identified application.

Materials

Formulation 17 in US Patent Number 6,017,860 (a shampoo containing 1% native xanthan gum), Example 3 in JP 11-236310 (a skin cream containing 0.3% heat treated xanthan gum), and Formulation 13 of the above-identified patent application were prepared as described.

Testing

High humidity curl retention test

The test was conducted at 72°F (22°C) and 90% Relative Humidity over a period of 8 hours. The procedure allows for statistical analysis of formulation variables. The percentage curl retention was calculated by: $\text{Curl Retention}\% = 100 \times (L - L_0) / (L - L_0)$, where L=length of hair fully extended, L₀=initial curl length, L_t=curl length at a given time t.

The test was performed on 10" long x 2 gram tresses of European virgin brown hair (9 replicate tresses per sample). Cleaned wet hair tresses were combed through to remove tangles and excess water is removed. 0.5 gram of sample hair gel was applied to each tress, gently "worked into" the hair tress and combed through. Curls of hair were made using ½" diameter Teflon mandrel, placed on a tray and dried in an oven overnight. The dried curls were removed from the oven and allowed to cool to room temperature. The curls were suspended from the bound end of the tress on graduated transparent curl retention boards. An initial curl length reading was taken before placing boards and curls into the environment chamber. Then curl lengths were recorded up to 8 hours. Curl retention averages were then calculated.

Results

The results are shown in Figure 1.

Conclusions-

As can be seen, the prior art formulation provides high humidity curl retention of no more than 70% after 2 hours. In contrast, the compositions of the above-identified patent application provide high humidity curl retention at 2 hours of about 95%, specifically over the 80% claimed. Therefore, the formulations described in US 6017860 and JP 11-236310 are not suitable to be used as hair cosmetic compositions.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by a fine or imprisonment or both under 1001 of Title 18 of the United States Code and such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

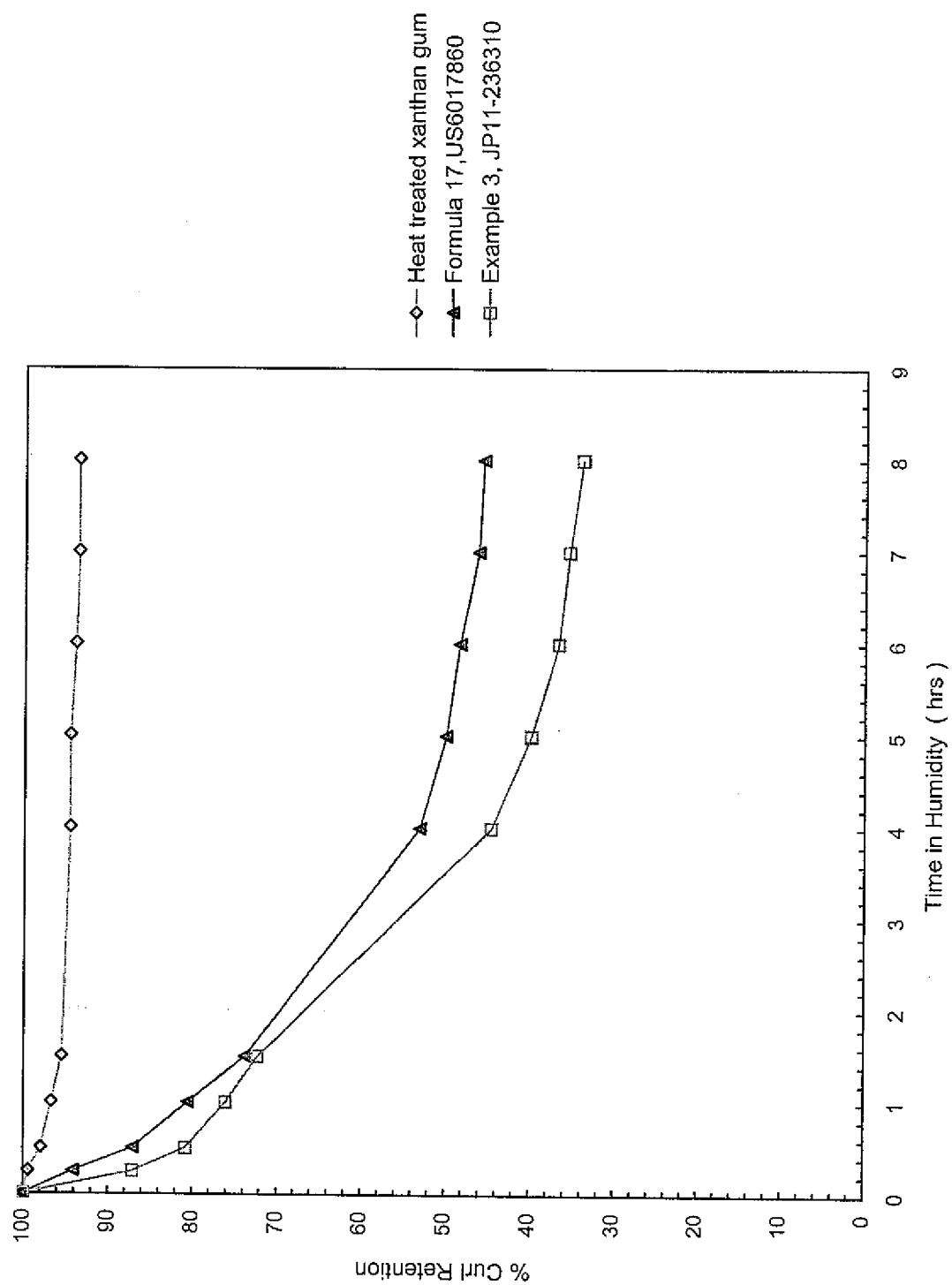
Signed at Bridgewater, NJ., this 5/10/04.
location date

Gary T. Martino
Gary T. Martino

59608

FIGURE 1

Time Plot of Sample Averages



RELATED PROCEEDINGS APPENDIX

As noted in Section II of the current Appeal Brief, no decisions have been rendered by a court or the Board in any proceeding related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal. Therefore, no copies of such decisions are to be had for the purpose of this Appendix.